

48. (New) A method of extracting glucosinolates and isothiocyanates from plant tissue comprising homogenizing said plant tissue in an excess of a mixture of dimethyl sulfoxide, acetonitrile and dimethylformamide at a temperature sufficient to inactivate myrosinase enzyme activity.

49. (New) The method of claim 48, wherein the ratio of dimethyl sulfoxide:acetonitrile:dimethylformamide is 1:1:1.

50. (New) The method of claim 48, wherein said temperature is between 0°C and the freezing temperature of the extraction mixture.

51. (New) The method of claim 48, wherein said temperature is between -50°C and the freezing temperature of the extraction mixture.

52. (New) The method of claim 48, wherein said plant tissue is rich in glucosinolates.

53. (New) The method of claim 52, wherein said plant tissue is selected from the group consisting of cruciferous sprouts measured after 3 days of growth, cruciferous seeds, plants or plant parts.

54. (New) The method of claim 53, wherein said sprouts, seeds, plants or plant parts have at least 200,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

55. (New) The method of claim 53, wherein said sprouts, seeds, plants or plant parts have at least 300,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

56. (New) The method of claim 53, wherein said sprouts, seeds, plants or plant parts have at least 400,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

57. (New) The method of claim 53, wherein said sprouts, seeds, plants or plant parts have at least 500,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

58. (New) A method of extracting glucosinolates and isothiocyanates from plant tissue rich in glucosinolates, with the exception of cabbage, cress, mustard and radish sprouts, comprising homogenizing said plant tissue in a non-toxic solvent at a temperature sufficient to inactivate myrosinase enzyme activity.

59. (New) The method according to claim 58, wherein said solvent is water.

60. (New) The method of claim 59, wherein said water is 100°C.

61. (New) The method according to claim 58, wherein said solvent is liquid carbon dioxide.

62. (New) The method according to claim 58, wherein said solvent is ethanol.

63. (New) The method of claim 58, wherein said plant tissue is selected from the group consisting of cruciferous sprouts measured after 3 days of growth, cruciferous seeds, plants and plant parts.

64. (New) The method of claim 63, wherein said sprouts, seeds, plants or plant parts have at least 200,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

65. (New) The method of claim 63, wherein said sprouts, seeds, plants or plant parts have at least 300,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

66. (New) The method of claim 63, wherein said sprouts, seeds, plants or plant parts have at least 400,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

67. (New) The method of claim 63, wherein said sprouts, seeds, plants or plant parts have at least 500,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.